Evaluation Report on the Appropriateness of Treatment: Youth Admitted to Residential Chemical Dependency Treatment Under the "Becca" Bill

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Peggy L. Peterson, Ph.D., M.P.H.
Alcohol and Drug Abuse Institute
University of Washington

Prepared for
Kenneth D. Stark, Director
The Division of Alcohol and Substance Abuse (DASA)
Washington State Department of Social and Health Services

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EXECUTIVE SUMMARY

Recent Washington State legislation known as the "Becca" Bill (Engrossed Second Substitute Senate Bill 5439, Chapter 312, Laws of 1995) had as its intent to help parents of runaway/at-risk youth regain control over their children and to help these parents obtain chemical dependency and mental health treatment for their children who were in need of treatment. To this end, the legislation modified parental consent procedures for minor children, modified court procedures to compel children to enter treatment, authorized law enforcement to take runaway/at-risk youth to their parents' home and/or secure crisis residential centers and established procedures for enforcing truancy laws. The Division of Alcohol and Substance Abuse (DASA) was required to evaluate the appropriateness of residential chemical dependency treatment for youth admitted to treatment under the auspices of the "Becca" Bill. This report presents the findings of the evaluation of the appropriateness of treatment for youth who were admitted to treatment under the "Becca" Bill from August, 1995 (the first date youth were admitted) through December, 1996.

METHOD

Residential treatment agencies were required by DASA to report all "Becca" admissions to them within 24 hours. DASA contracted with a certified chemical dependency counselor to conduct medical necessity reviews and evaluate the appropriateness of the treatment admission. Two standard and widely accepted criteria were used to determine treatment appropriateness: the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for substance dependence (American Psychiatric Association, 1994) and the American Society of Addiction Medicine (ASAM) Patient Placement Criteria for the Treatment of Substance-Related Disorders (Mee-Lee et al., 1996). Sources of information included client records from the treatment agencies, staff interviews, and when possible, youth interviews. DASA contracted with the Alcohol and Drug Abuse Institute (ADAI) at the University of Washington to conduct the analysis of the appropriateness of treatment information for the first year. Data was submitted to ADAI for all admissions from August 1995 (when the first "Becca" admission occurred) through December 9, 1996. There were 132 "Becca" youth who were admitted during this time period.

In addition to providing results on the appropriateness of treatment admission, this report provides descriptive information on "Becca" youth as well as characteristics of the treatment episodes. Results are presented by gender and by type of "Becca" admission (i.e., whether admitted under an At-Risk Youth (ARY), Child in Need of Service (CHINS), or a truancy petition, or as an Involuntary Treatment Admission (ITA)). Treatment episode characteristics are presented by treatment agency.

FINDINGS

I. DESCRIPTION OF "BECCA" YOUTH

Admission Type

- There were some trend level differences in the type of admission by gender.
    - 75% of "Becca" females were admitted to treatment under an ARY petition compared to 62% of males.
    - All but one of the ten ITA admissions were males.
- All but one youth consented to treatment at admission.

Admissions by County of Residence

- The largest numbers of admissions were in the most populous counties, King, Snohomish, and Pierce.
- There were no "Becca" residential treatment admissions during this time period in the large block of rural counties in central eastern Washington.

Demographic Characteristics of "Becca" youth

- 48% of the youth were male, 52% were female.
- Average age of youth was 15.
- 85% of the youth were White, 6% African American, 7% Native American, and 1.5% Hispanic.

Family History of Drug Abuse

- 86% of the youth reported that either their parents or siblings had a history of drug abuse.

Type of Drugs Used at Treatment Admission

The primary, secondary, and tertiary drugs of choice of the youth were obtained either from youth interviews by the contractor or from client records. Drug of choice was defined as the most frequently used drug. To provide an estimate of the prevalence of abuse for each type of drug, the proportion for whom a drug was either a primary, secondary, or tertiary drug of choice was calculated.

- Marijuana was a drug of choice for 90% of the sample. It was the primary drug of choice for 68% of the males and 49% of the females.
- Alcohol was a drug of choice for 78% of the sample, and the primary drug of choice for about 20% of the sample. There were no gender differences in the proportion for whom alcohol was a primary drug.
- Illicit drugs other than marijuana were the primary drug of choice for nearly three times the proportion of females as males (28% vs. 8%, respectively). This difference is primarily due to amphetamine/methamphetamine use. 45% of females used amphetamines compared to 19% of males.

II. EVALUATION OF THE APPROPRIATENESS OF TREATMENT

The evaluation of the appropriateness of treatment was based on medical necessity reviews conducted by the contracted certified chemical dependency counselor. Using clinical information in the client records, the counselor determined whether or not the client met each the DSM-IV criteria for substance dependence and ASAM criteria for intensive inpatient treatment. **Nearly all of the youth (95%) were found to be chemically dependent, significantly impaired and, hence, appropriate for residential treatment.**

- 95% of the "Becca" youth admitted to residential treatment met criteria for DSM-IV criteria for substance dependence, and most far exceeded the minimum criteria. To be diagnosed as substance dependent, the youth needed to meet three out of the seven criteria. Nearly 60% of the youth met six or more criteria.

- 88% of the youth had evidence of physiological dependence. The rate at which physiological dependence develops varies by type of drug and use patterns, but typically develops after regular and heavy drug use and is an indicator of more advanced stage of substance dependence.

  Until recently, it was believed that adolescents were unlikely to exhibit symptoms of physiological dependence such as withdrawal, in part because given their age and relatively short history of drug use. However, recent studies have disputed this (Stewart and Brown, 1995; Martin et al., 1995). Using a more detailed assessment of withdrawal symptoms than reported here, Stewart and Brown (1995) found that, consistent with the findings of this evaluation, the majority of their sample of youth in treatment exhibited signs of withdrawal. They suggest that the variety and intensity of withdrawal among youth may be due to the use of multiple substances.

- 95% of the "Becca" youth admitted to residential treatment met ASAM criteria for placement in residential treatment. ASAM criteria for residential treatment are that youth need to meet criteria for substance dependence and meet criteria for two out of six assessment dimensions. Nearly two-thirds of the youth met criteria for all six assessment dimensions.

III. CHARACTERISTICS OF TREATMENT EPISODES

Prior Treatment History

- Over 60% of "Becca" youth received prior chemical dependency treatment. A larger proportion of males (43%) than females (26%) had previously received residential treatment.

- 63% of the "Becca" youth had received some form of prior mental health treatment, with about 20% having received in-patient treatment and 38% having received family counseling.

Type of Discharge from Treatment

- Over half (51%) of the youth completed treatment. There were no significant differences in rates of treatment completion by gender.
- Among youth who did not complete treatment, type of treatment discharge differed by gender
  - 56% of males who did not complete treatment, compared to 19% of the females, were discharged from treatment due to rule violations including repeated noncompliance, violence, or property destruction.
  - Over 40% of females who did not complete treatment, compared to 19% of males, ran from treatment.

Treatment Episode Characteristics by Level of Treatment

There are two levels of residential treatment for adolescents in Washington state: Level I, Youth *Basic* Residential Treatment and Level II, Youth *Intensive* Residential Treatment. Level II treatment serves youth who have symptoms of mental health diagnosis requiring concurrent management with addiction treatment, have extreme family dysfunction, have experienced trauma, present a major risk of danger to him/herself or others, or are at high risk to not complete treatment. Note that Level I and Level II residential treatment designations are distinct from the ASAM levels of treatment designations.

- **Overall, 70% of the "Becca" youth were admitted to Level II programs.**

- **Youth in Level I programs were more likely to complete treatment than youth in Level II programs. 76% of "Becca" youth in Level I programs completed treatment compared to 37% of "Becca" youth in Level II programs.**
- **On average, males were in Level II treatment longer than were females. Among youth who completed Level II treatment, males were in treatment an average of 43 days, whereas females were in treatment and average of 30 days.**

CONCLUSION

- **The medical necessity review of the youth admitted to residential treatment under the auspices of the "Becca" Bill found that residential chemical dependency treatment was appropriate for over 95% of the youth.**

All but six (4.5%) of the 132 "Becca" youth admitted to residential treatment between August, 1995 and December, 1996 met DSM-IV criteria for substance dependence and ASAM criteria for intensive inpatient treatment. In fact, the majority of youth far exceeded minimum criteria for substance dependence--indicating the youth exhibited clinically significant levels of impairment. The profiles of the substance dependence criteria showed a high proportion of youth who are not able to control their drug use, who are devoting a great deal of time to drug use or recovery from its use, and who are giving up important activities for because of the use of alcohol or other drugs. About 88 percent of the youth presented evidence of physical dependence as manifested by either withdrawal symptoms, development of tolerance, or both. It is also worth noting that nearly all of these high risk, runaway youth signed into treatment on a voluntary basis.

All but six of the youth met ASAM criteria for residential treatment, and nearly two-thirds of "Becca" youth met criteria for all six of the ASAM dimensions. The ASAM criteria portray youth with severe levels of behavioral instability, escalating drug use, and who are living in an environment that is not conducive to successful treatment at less intensive levels of care. In fact, about two-thirds of the youth had parents or legal guardians who were unable to provide the support necessary for less intensive levels of care. This is consistent with the finding that over 70% of the youth were reported to have parents with a history of substance abuse, although this figure includes parents and step-parents who may or may not still be involved in the youths' lives. The high proportion of parental drug abuse and youth coming from environments not conducive to the youth's recovery raises questions about the efficacy of the "Becca" Bill with its sole focus on compelling youth to obtain treatment services. Measures may be needed which address the larger family issues.

The evaluation suggest at least three areas for further study.

- Gender differences in patterns of drug use and length of treatment
- Geographic gap in residential treatment admissions for "Becca" youth.
- Investigation of treatment completion rates and ways to increase treatment retention for youth.

INTRODUCTION

Recent Washington State legislation known as the "Becca" Bill (Engrossed Second Substitute Senate Bill 5439, Chapter 312, Laws of 1995) had as its intent to help parents of runaway/at-risk youth regain control over their children and to help these parents obtain chemical dependency and mental health treatment for their children who are in need of treatment. To this end, the legislation modified parental consent procedures for minor children, modified court procedures to compel children to enter treatment, authorized law enforcement to take runaway/at-risk youth to their parents' home and/or secure crisis residential centers, and established procedures for enforcing truancy laws. The Division of Alcohol and Substance Abuse (DASA) was required to evaluate the appropriateness of admission to residential chemical dependency treatment of youth admitted to treatment under the auspices of the "Becca" Bill. This report presents the findings of the evaluation of the appropriateness of treatment for youth who were admitted to treatment under the "Becca" Bill from August, 1995 (the first date youth were admitted) through December, 1996.

METHOD

Procedures

The legislation required that DASA randomly select and review the information on youth admitted to residential treatment "upon application of their parent" in order to evaluate the appropriateness of the admission. In practice, and in law prior to the "Becca" Bill, a parent was the *only* person who *could* apply and admit a minor to residential treatment agencies that were certified by DASA. Thus, *all* youth admitted to residential chemical dependency treatment were admitted upon application of their parents. In order for this evaluation to be responsive to the intent of the law, the definition of what was meant by "upon application of their parent" needed to be clarified.

DASA determined that to be consistent with the intent of the law, admissions would be considered "Becca" admissions if they met at least one of the following criteria:

- Youth admitted to residential treatment under an At-Risk Youth (ARY) or Children in Need of Services Petition (CHINS); and/or
- Youth referred to residential treatment under the involuntary treatment commitment regulations (RCW 70.96A.140); (ITA) and/or
- Non-consenting youth admitted to residential treatment by parents (parent admission), and or
- Youth referred to treatment due to a truancy petition.

Throughout this report, "Becca" youth or "Becca" admissions refers to youth meeting at least one of these four criteria. Further, rather than review a sample of admissions, DASA has reviewed all "Becca" residential treatment admissions.

Residential treatment agencies were required by DASA to report all "Becca" admissions to them within 24 hours. DASA contracted with a certified chemical dependency counselor to conduct medical necessity reviews and evaluate the appropriateness of the treatment admission. To make the determination of the appropriateness of treatment, the contractor reviewed client records from the treatment agencies, interviewed staff, and when possible, interviewed youth. DASA contracted with the Alcohol and Drug Abuse Institute (ADAI) at the University of Washington to conduct the analysis of the client information collected by the contractor. Data was submitted to ADAI for all admissions from August 1995 (when the first "Becca" admission occurred) through December 9, 1996. There were 132 "Becca" youth who were admitted during this time period.

In addition to providing results on the appropriateness of treatment admission, this report provides descriptive information on "Becca" youth as well as characteristics of the treatment episodes. Results are presented by gender and by type of "Becca" admission (i.e. whether admitted under an ARY, CHINS, truancy petition, or as an ITA). There was only one parent admission of a non-consenting youth, and this admission is not included in the tables of the analyses by type of admission. Treatment episode characteristics are presented by treatment agency.

Treatment Appropriateness Criteria

Two widely-accepted standard criteria were used to determine treatment appropriateness. First, substance dependence was determined using DSM-IV criteria (Diagnostic and Statistical Manual of Mental Disorders, American Psychiatric Association, 1994). The DSM-IV criteria are one of the most commonly used diagnostic criteria for alcohol and drug use disorders in the United States. Substance dependence is defined as "a maladaptive pattern of substance use, leading to clinically significant impairment or distress" (DSM-IV; APA, 1996 p. 181). People meeting criteria for substance dependence are thus appropriate for treatment. To meet the diagnostic criteria for substance dependence, the individual must have experienced three of the following in the previous year:

(1) Evidence of tolerance;
(2) Withdrawal symptoms or use of the drug to avoid or relieve withdrawal symptoms;
(3) Substance is often taken in larger amounts or over a longer period than was intended;
(4) There is a persistent desire or unsuccessful efforts to cut down or control substance use;
(5) A great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects;
(6) Important social, occupational, or recreational activities are given up or reduced because of substance use;
(7) The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

The second criteria used was the American Society of Addiction Medicine (ASAM) Patient Placement Criteria for the Treatment of Substance-Related Disorders (Mee-Lee et al., 1996). The ASAM criteria provide a standard way to determine the most appropriate level of treatment for an individual. For example, whether the person, given his or her history and current situation, is best suited for outpatient or residential treatment. Criteria have been established for five levels of treatment and six assessment dimensions (Mee-Lee et al., 1996). The five levels of treatment are:

Level 0.5: Early Intervention;
Level I: Outpatient;
Level II: Intensive Outpatient;
Level III: Medically-Monitored Intensive Inpatient; and
Level IV: Medically Managed Intensive Inpatient treatment.

The six assessment dimensions are:

(1) Acute Intoxication and/or Potential Withdrawal;
(2) Biomedical Conditions and Complications;
(3) Emotional/Behavioral Conditions and Complications;
(4) Treatment Acceptance/Resistance;
(5) Relapse Potential; and
(6) Recovery Environment.

The adolescent residential treatment programs that "Becca" youth were admitted to for this evaluation would fall under the Level III category, Medically Managed Intensive Inpatient programs. To meet the criteria for this level of treatment, youth first must meet DSM-IV or other standard criteria for substance-related disorder. In addition, the individual must meet criteria in at least two of the six ASAM assessment dimensions.

FINDINGS

I. DESCRIPTION OF "BECCA" YOUTH

Admission Type

- **There were some trend level differences in the type of admission by gender.**
  - **75% of "Becca" females were admitted to treatment under an ARY petition compared to 62% of males.**
  - **All but one of the ten ITA admissions were males.**
- **All but one youth consented to treatment at admission.**

Table 1: Type of Admission by Gender

	Male	Female	Overall
Admission Type	**% n=63**	**% n=69**	**% n=132**
ARY	61.9 (39)	75.4 (52)	68.9 (91)
CHINS	20.6 (13)	18.8 (13)	19.7 (26)
ITA	14.3 (9)	1.4 (1)	7.6 (10)
Truant	1.6 (1)	4.3 (3)	3.0 (4)
Parent Admit/Youth Non-Consent	1.6 (1)	0	.8 (1)

The majority of "Becca" youth were admitted to treatment under an At-Risk Youth petition, which is what would be expected. The ARY petition was the most appropriate petition for parents to use to obtain treatment services for their children. A CHINS petition is primarily for youth who need an out of home placement, and residential treatment is not considered an out-of-home placement. Females were somewhat more likely than males to be admitted to residential treatment under an ARY petition ($p<.10$). About 20% of the youth were admitted under a CHINS petition. The number of ITA admissions, although few, actually reflects an increase in the use of ITA for treatment admission of youth. Prior to the "Becca" Bill, ITA admissions were extremely rare. During the time frame of this evaluation all but one of the ITA admissions were for males. Only four youth were defined as "Becca" youth due to truancy petitions. It is not clear whether this is because few youth with truancy petitions met criteria for residential treatment or whether they were not being adequately screened for substance dependence. It is also noteworthy that all but one of the youth consented to treatment. This is consistent with the Washington Administrative Code which, although it allows that youth can be admitted to treatment by their parents without the youth's consent, it recommends that the consent of youth be obtained whenever possible.

Admissions by County

The number of "Becca" admissions to residential treatment are presented by youth's county of residence in Map 1. Youth from 22 counties were admitted as "Becca" youth to residential treatment. Counties are shaded to represent the number of "Becca" youth admitted to residential treatment from that county. As would be expected, the largest numbers of admissions are in the

most populous counties, King, Snohomish, and Pierce. Each of these counties had over ten admissions during this time period followed by Spokane, Yakima, Thurston, and Clallam counties which had between 6-10 youth admissions.

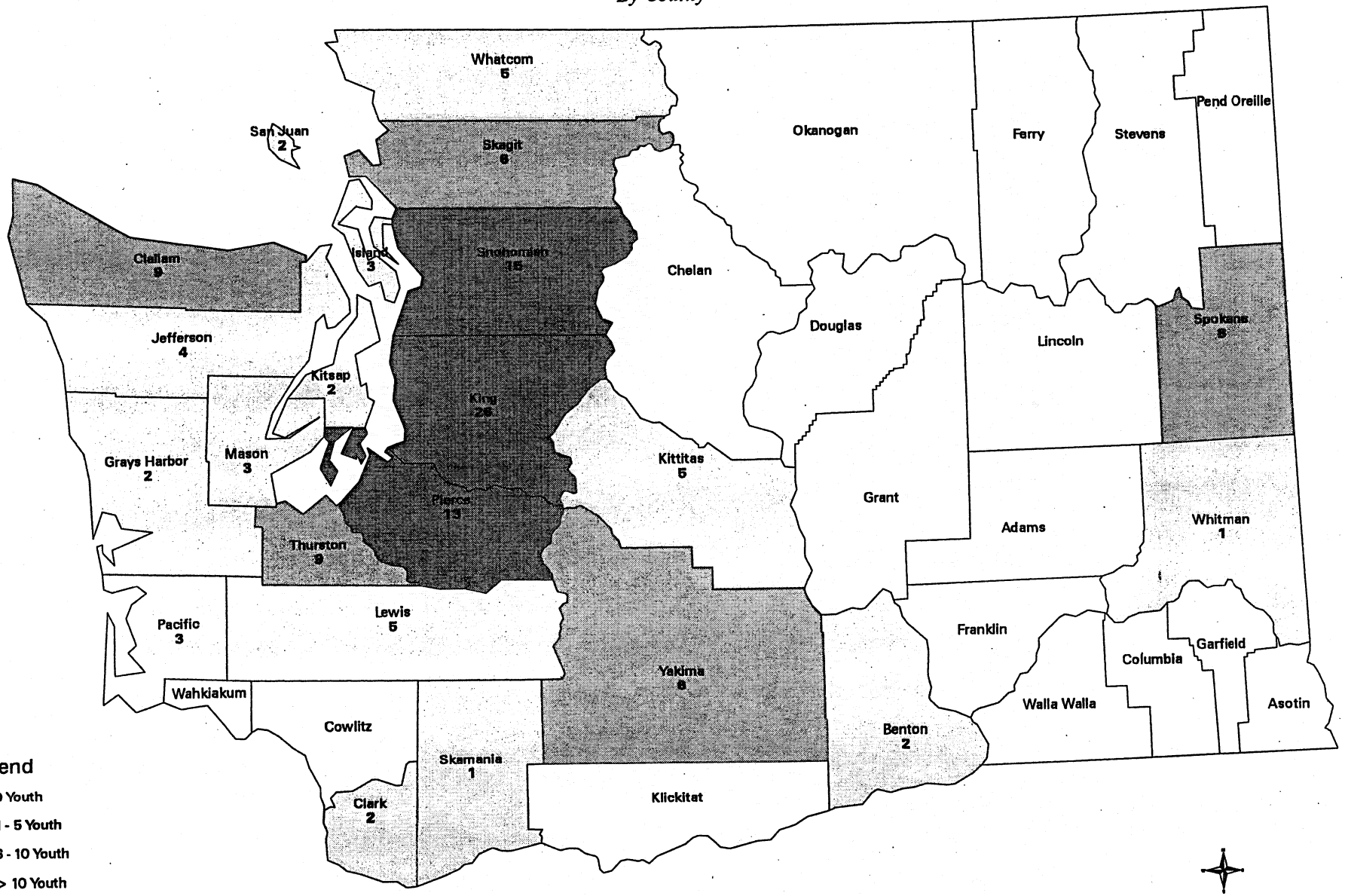
Map 2 details the number of "Becca" admissions for each county by the type of admission. In this map, ARY admissions are indicated as "A", CHINS as "C", Involuntary Treatment as "I", and Truant as "T". Snohomish is the only county with more CHINS admissions (9) than ARY admission (6). The majority of ITA admissions occurred for youth from Spokane County. Six of the 10 ITA admissions are in Spokane County, with two in King County, one in Pierce County, and one in San Juan County.

There were no "Becca" admissions during this time period which originated from the large block of rural counties in central eastern Washington. It is not clear why there is this geographic gap. We do not have information to address this question, as the ARY and CHINS process is conducted through the Division of Child and Family Services and DASA responds to referrals through these processes. Nevertheless, the pattern is quite striking and worthy of further investigation.

TOTAL 'BECCA' YOUTH ADMISSION TO RESIDENTIAL TREATMENT

August, 1995 to December, 1996

By County

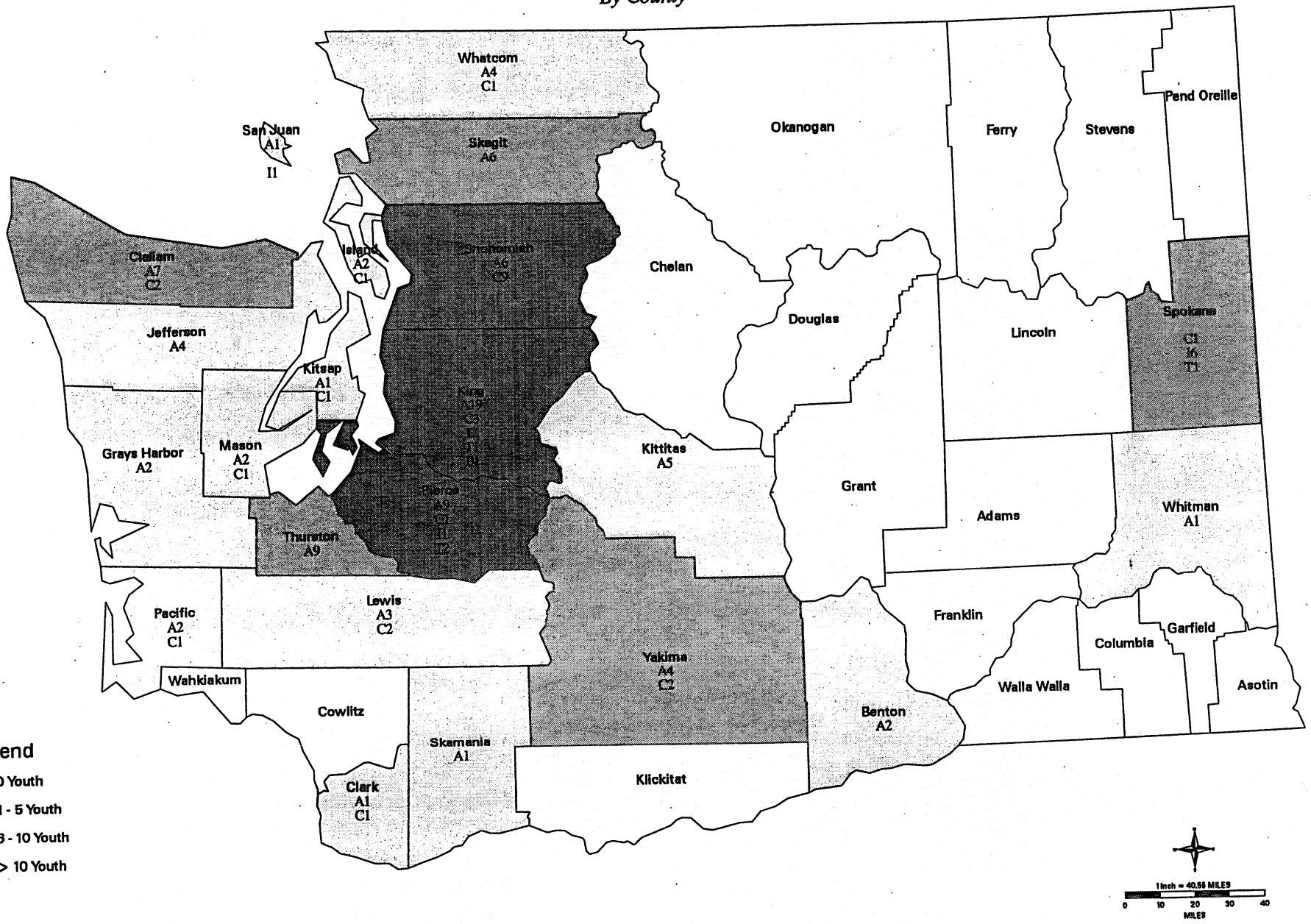


June 20, 1997

DETAILED 'BECCA' YOUTH ADMISSION TO RESIDENTIAL TREATMENT

August, 1995 to December, 1996

By County



June 26, 1997

Demographic Characteristics of "Becca" youth

- **48% of the youth were male and 52% were female.**
- **Average age of youth was 15.**
- **85% of the youth were Caucasian, 6% African American, 7% Native American, and 1.5% Hispanic.**
- **ITA youth were somewhat older than other "Becca" youth.**

Table 2: Age and Ethnicity by Gender

INDIVIDUAL CHARACTERISTICS	Male	Female	Overall
Age	% n=63	% n=69	% n=132
13 or younger	17.5 (11)	18.8 (13)	18.2 (24)
14	14.3 (9)	23.2 (16)	18.9 (25)
15	27.0 (17)	34.8 (24)	31.1 (41)
16	28.6 (18)	17.4 (12)	22.7 (30)
17	12.7 (8)	5.8 (4)	9.1 (12)
Mean Age:	*15.5*	*15.1*	*15.3*
Ethnicity/Race	% n=63	% n=69	% n=132
Caucasian	85.7 (54)	85.5 (59)	85.6 (113)
African American	6.3 (4)	5.8 (4)	6.1 (8)
Native American	6.3 (4)	7.2 (5)	6.8 (9)
Hispanic	1.6 (1)	1.4 (1)	1.5 (2)

Table 2 presents the demographic characteristics of the youth. "Becca" youth ranged in age from 11 to 17, with a mean of 15.3. The majority of youth were Caucasian (85.6), which is similar to the proportion of Caucasian individuals in the state (88.5). There were no Asian-Americans admitted as "Becca" youth during this time period.

As seen in Table 3, ITA youth were almost a year older than ARY and CHINS admissions. However, as noted above, there were only 10 ITA admissions, and all but one were male. The number of ethnic minority "Becca" youth are too few to be able to test for statistically significant differences. All of the truant and parent admissions were among Caucasian youth, but there were only four truant admissions and one parental admission.

Table 3: Age and Ethnicity by Type of Admission

DEMOGRAPHIC	ARY	CHINS	ITA	Truant
Age	% n=91	% n=26	% n=10	% n=4
13 or younger	19.8 (18)	19.2 (5)	10.0 (1)	
14	15.4 (14)	34.6 (9)	10.0 (1)	25.0 (1)
15	37.4 (34)	15.4 (4)	20.0 (2)	25.0 (1)
16	19.8 (18)	26.9 (7)	30.0 (3)	50.0 (2)
17	7.7 (7)	3.8 (1)	30.0 (3)	
Mean Age:	*15.2*	*15.1*	*16.0*	*15.6*
Ethnicity/Race	% n=91	% n=26	% n=10	% n=4
Caucasian	87.9 (80)	76.9 (20)	80.0 (8)	100.0 (4)
African American	5.5 (5)	7.7 (2)	10.0 (1)	
Native American	5.5 (5)	11.5 (3)	10.0 (1)	
Hispanics	1.1 (1)	3.8 (1)		

Family History of Drug Abuse

- **86% of the youth reported that either their parents or siblings had a history of drug abuse.**

The majority of "Becca" youth came from families with a history of drug abuse. Data about family drug abuse history was obtained through interviews with youth by the medical necessity reviewer under contract with DASA, or, if the youth was not available, through review of client records. Youth were asked whether any of their biological or step parents or siblings had ever abused alcohol or drugs. Only 14% reported no drug abuse among siblings or parents. Almost half reported drug abuse among their parents only, and 29% reported drug abuse among both parents and siblings. There were no significant differences in family drug abuse history by gender or type of admission.

Table 4: Family History of Drug Abuse by Gender

	Male	Female	Overall
Family History of Drug Abuse	% n=60	% n=63	% n=123
None	18.3 (11)	9.5 (6)	13.8 (17)
Siblings only	8.3 (5)	9.5 (6)	8.9 (11)
Parents only	45.0 (27)	52.4 (33)	48.8 (60)
Both Parents and Siblings	28.3 (17)	28.6 (18)	28.5 (35)

Table 5: Family History of Drug Abuse by Type of Admission

	ARY	CHINS	ITA		Truant	
Family History of Drug Abuse	% n=84	% n=24	% n=10		% n=4	
None	11.9 (10)	16.7 (4)	10.0	(1)	25.0	(1)
Siblings only	10.7 (9)	8.3 (2)	0		0	
Parents only	50.0 (42)	41.7 (10)	50.0	(5)	75.0	(3)
Both Parents and Siblings	27.4 (23)	33.3 (8)	40.0	(4)	0	

Type of Drugs Used at Treatment Admission

The primary, secondary, and tertiary drugs of choice of the youth were obtained either from youth interviews by the medical necessity reviewer under contract with DASA or from client records. Drug of choice was defined in the interview as the most frequently used drug. Table 6 presents the primary, secondary and tertiary drugs of choice by gender. As an indicator of the prevalence of use for each type of drug, the proportion for whom a drug was either a primary, secondary, or tertiary drug of choice was calculated and is also presented in Table 6. However, it should be noted that this is likely to underestimate drug use prevalence if youth used more than three drugs.

- **Marijuana was a drug of choice for 90% of the sample. It was the <u>primary</u> drug of choice for 68% of the males and 49% of the females.**
- **Alcohol was a drug of choice for 78% of the sample, and the <u>primary</u> drug of choice for about 20% of the sample. There were no gender differences in the proportion for whom alcohol was a primary drug.**
- **Illicit drugs other than marijuana were the <u>primary</u> drug of choice for nearly three times the proportion of females as males (28% vs. 8%, respectively). This difference is**

primarily due to amphetamine/methamphetamine use. 45% of females used amphetamines compared to 19% of males.

Polydrug use appears to be the norm among "Becca" youth in treatment. Nearly 60% of the youth (58.3) used at least three drugs (including alcohol, but excluding nicotine), which was the maximum number that was asked about, and 96% used at least two drugs. Some important gender differences in the types of drugs used emerged. Although marijuana was the primary drug of choice for the majority of the sample (60 percent overall) it was the primary drug of choice for a larger percentage of males (68%) than females (49%) ($p<.03$). It might be expected that the less frequent use of marijuana as the primary drug among females might be balanced by alcohol being the primary drug of choice for females. This was not the case. Alcohol was the primary drug of choice for about 20 percent of both males and females.

However, illicit drugs other than marijuana were the primary drug of choice for more females than males. About 28% (19) of the females had an illicit drug other than marijuana as their primary drug of abuse, compared to 8% (5) of males ($p<.02$). This appears to be primarily due to females using amphetamines or methamphetamines. A substantially larger proportion of females used amphetamines/methamphetamines as a primary, secondary, or tertiary drug of abuse than did males (45% vs. 19%, $p<.002$). Hallucinogens were also a drug of choice for a substantial proportion of both males and females (32% and 22%, respectively). The proportions were not significantly different. The gender differences in the types of drug used warrant further investigation. The differences found here are based on a small sample. It is important to understand first of all whether these differences are reliable, and if they are, what factors underlie these gender differences. Understanding these differences may have important implications for tailoring drug treatment programs.

Table 7 presents primary, secondary, and tertiary drugs by type of "Becca" admission. The pattern of primary drug use is similar across types of admission. It appears that ARY youth are slightly less likely to have alcohol as a primary drug of choice, but numbers for each type of admission are too small to test for significant differences. This apparent difference may also be confounded by the effects of gender. It should be noted that the three ARY youth whose primary drug of abuse was nicotine were determined by the medical necessity review to not meet criteria for admission.

Table 6 : Primary, Secondary, and Tertiary Drugs of Choice, by Gender

DRUG USE	Male	Female	Overall
Primary Drug	% n=63	% n=69	% n=132
Marijuana*	68.3 (43)	49.3 (34)	58.3 (77) *(p<.03)
Alcohol	22.2 (14)	20.3 (14)	21.2 (28)
Amphetamine/Methamphetamine**	3.2 (2)	20.3 (14)	12.1 (16) **(p<.01)
Cocaine	0	2.9 (2)	1.5 (2)
Hallucinogens	1.6 (1)	2.9 (2)	2.3 (3)
Tranquilizers	0	0	0
Opiates	3.2 (2)	0	1.5 (2)
Inhalants	0	1.4 (1)	.8 (1)
Nicotine	1.6 (1)	2.9 (2)	2.3 (3)
Secondary Drug	% n=63	% n=66	% n=129
No Second Drug Abused	1.6 (1)	0	.8 (1)
Marijuana	23.8 (15)	30.3 (20)	27.1 (35)
Alcohol	49.2 (31)	42.4 (28)	45.7 (59)
Amphetamine/Methamphetamine	4.8 (3)	15.2 (10)	10.1 (13)
Cocaine	3.2 (2)	4.5 (3	3.9 (5)
Hallucinogens	11.1 (7)	7.6 (5)	9.3 (12)
Tranquilizers	1.6 (1)	0	.8 (1)
Opiates	0	0	0
Inhalants	1.6 (1)	0	.8 (1)
Nicotine	3.2 (2)	0 (2)	1.6 (2)
Tertiary Drug	% n=58	% n=64	% n=122
No Third Drug Abused	6.9 (4)	4.7 (3)	5.7 (7)
Marijuana	5.2 (3)	14.1 (9)	9.8 (12)
Alcohol	6.9 (4)	18.8 (12)	13.1 (16)
Amphetamine/Methamphetamine*	12.1 (7)	10.9 (7)	11.5 (14) *(p<.05)
Cocaine	6.9 (4)	10.9 (7)	9.0 (11)
Hallucinogens	24.1 (14)	12.5 (8)	18.0 (22)
Tranquilizers	0 (0)	0	0
Opiates	0	0	0
Inhalants	6.9 (4)	0	3.3 (4)
Nicotine	31.0 (18)	28.1 (18)	29.5 (36)
Drug of Abuse (either primary, secondary or tertiary drug).	% n=63	% n=69	% n=132
Marijuana	96.8 (61)	89.9 (62)	93.2 (123)
Alcohol	77.8 (49)	78.3 (54)	78.0 (103)
Amphetamine/Methamphetamine*	19.0 (12)	44.9 (31)	32.6 (43) *(p<.05)
Cocaine	9.5 (6)	17.4 (12)	13.6 (18)
Hallucinogens	31.7 (20)	21.7 (15)	26.5 (35)
Tranquilizers	1.6 (1)	0	.8 (1)
Opiates	3.2 (2)	0	1.5 (2)
Inhalants	7.9 (5)	1.4 (1)	4.5 (6)
Nicotine	33.3 (21)	29.0 (20)	31.1 (41)

Table 7: Primary, Secondary, and Tertiary Drugs of Choice, by Type of Admission

DRUG USE	ARY	CHINS	ITA	Truant
Primary Drug	% n=91	% n=26	% n=10	% n=4
Marijuana	61.5 (56)	50.0 (13)	60.0 (6)	50.0 (2)
Alcohol	17.6 (16)	26.9 (7)	30.0 (3)	25.0 (1)
Amphetamine/Methamphetamine	13.2 (12)	11.5 (3)	10.0 (1)	0
Cocaine	0	3.8 (1)	0	25.0 (1)
Hallucinogens	3.3 (3)	0	0	0
Tranquilizers	0	0	0	0
Opiates	0	7.7 (2)	0	0
Inhalants	1.1 (1)	0	0	0
Nicotine	3.3 (3)	0	0	0
Secondary Drug	% n=89	% n=25	% n=10	% n=4
No Second Drug Abused	1.1 (1)	0	0	0
Marijuana	23.6 (21)	32.0 (8)	40.0 (4)	25.0 (1)
Alcohol	50.6 (45)	36.0 (9)	40.0 (4)	25.0 (1)
Amphetamine/Methamphetamine	11.2 (10)	8.0 (2)	0	25.0 (1)
Cocaine	3.4 (3)	8.0 (2)	0	0
Hallucinogens	6.7 (6)	16.0 (4)	10.0 (1)	25.0 (1)
Tranquilizers	0	0	10.0 (1)	0
Opiates	0	0	0	0
Inhalants	1.1 (1)	0	0	0
Nicotine	2.2 (2)	0	0	0
Tertiary Drug	% n=86	% n=22	% n=9	% n=4
No Third Drug Abused	5.8 (5)	9.1 (2)	0	0
Marijuana	10.5 (9)	9.1 (2)	0	25.0 (1)
Alcohol	10.5 (9)	18.2 (4)	22.2 (2)	25.0 (1)
Amphetamine/Methamphetamine	10.5 (9)	18.2 (4)	11.1 (1)	0
Cocaine	7.0 (6)	13.6 (3)	11.1 (1)	25.0 (1)
Hallucinogens	17.4 (15)	13.6 (3)	33.3 (3)	0
Tranquilizers	0	0	0	0
Opiates	0	0	0	0
Inhalants	4.7 (4)	0	0	0
Nicotine	33.7 (29)	18.2 (4)	22.2 (2)	25.0 (1)
Drug of Abuse (either primary, secondary or tertiary drug)	% n=91	% n=26	% n=10	% n=4
Marijuana	93.4 (85)	88.5 (23)	100.0 (10)	100.0 (4)
Alcohol	76.9 (70)	76.9 (20)	90.0 (9)	75.0 (3)
Amphetamine/Methamphetamine	34.1 (31)	34.6 (9)	20.0 (2)	25.0 (1)
Cocaine	9.9 (9)	23.1 (6)	10.0 (1)	50.0 (2)
Hallucinogens	24.2 (22)	26.9 (7)	40.0 (4)	25.0 (1)
Tranquilizers	0	0	10.0 (1)	0
Opiates	0	7.7 (2)	0	0
Inhalants	6.6 (6)	0	0	0
Nicotine	37.4 (34)	15.4 (4)	20.0 (2)	25.0 (1)

II. EVALUATION OF THE APPROPRIATENESS OF TREATMENT

The evaluation of the appropriateness of treatment was based on medical necessity reviews conducted by the contracted certified chemical dependency counselor. Based on clinical information in the client records, the contractor determined whether or not the client met each of the DSM-IV criteria for substance dependence and ASAM criteria for intensive inpatient treatment (Level III).

The results of the appropriateness of treatment review are reported based on the number of individuals rather than the number of admissions. There were 16 youth who had more than one treatment admission during this time, 14 of these individuals had two admissions and two individuals had three admissions. The first admission of each client is included in the current report. For all but three of the individuals, the admission criteria data were identical across all admissions. For two of the three youth, the first admission had the fewest number of criteria met for that individual. However, all of the admissions for these 16 individuals met DSM-IV criteria for admission.

DSM-IV Criteria for Substance Dependence

- **95% of the "Becca" youth admitted to residential treatment met criteria for DSM-IV criteria for substance dependence, and most far exceeded the minimum criteria. To be diagnosed as substance dependent, the youth need to meet three out of the seven criteria. Nearly 60% of the youth met six or more criteria.**
- **88% of the youth had evidence of physiological dependence, an indicator of a more advanced stage of substance dependence.**

Table 8 presents the DSM-IV criteria for substance dependence and the percent of youth meeting each of the individual criteria. Substance dependence indicates clinically significant impairment or distress. To be determined as substance dependent, the youth needed to meet three or more of the seven major criteria categories (indicated by bullet marks in the table) over the past year. As can be seen from the table, the majority of youth met each of the seven criteria. In fact, the average number of criteria met was 5.4, with a median of 6. About 60% of the youth met six or more criteria. There were no differences by gender in the proportion meeting each of the criteria.

If either of the first two criteria , tolerance and withdrawal, are met, then there is evidence of physiological dependence. The rate at which physiological dependence develops varies by type of drug and use patterns, but typically develops after regular and heavy drug use and is an indicator of a more advanced stage of substance dependence. The medical necessity review indicated that there was evidence of physiological dependence for nearly 90% of the sample. Over 85% of the sample showed evidence of tolerance and nearly 80% of the sample had withdrawal symptoms. Together, 88% of the sample showed signs of either tolerance or withdrawal. Until recently, it was believed that adolescents were unlikely to exhibit symptoms of physiological dependence, in part because given their age and relatively short history of drug use (e.g., Blum, 1987; Bright, Hawley, & Siegel, 1985). However, recent studies have disputed this (Stewart and Brown, 1995; Martin et al., 1995). Using a more a more detailed assessment of withdrawal symptoms than reported here, Stewart and Brown (1995) found that, consistent with the findings of this evaluation, the majority of their sample of youth in treatment exhibited signs of withdrawal. They suggest that the variety and intensity of withdrawal among youth may be due to the use of multiple substances.

Table 8: Percent of "Becca" Youth Meeting DSM-IV Criteria for Substance Dependence, by Gender

DIAGNOSIS: DSM-IV Substance Dependence criteria (Must meet three or more of the seven major criteria categories.)	Male Percent (n=63)	Female Percent (n=69)	Full Sample Percent (n=132)
• Meet Tolerance criteria for dependence (must meet one of the following criteria)	**85.7**	**88.4**	**87.1**
Need for markedly increased amount of substance to achieve intoxication or desired effect	79.4	73.9	76.5
Markedly diminished effect with continued use of the same amount of the substance	12.7	18.8	15.9
• Meet Withdrawal criteria for dependence (must meet one of the following criteria)	**74.6**	**81.2**	**78.0**
Characteristic withdrawal syndrome for the substance	73.0	79.7	76.5
Same substance is taken to relieve or avoid withdrawal symptoms	7.9	5.8	6.8
• The substance is often taken in larger amounts or over a longer period than was intended	**87.3**	**82.6**	**84.8**
• There is a persistent desire or unsuccessful efforts to cut down or control substance use	**50.8**	**52.2**	**51.5**
• A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects	**90.5**	**85.5**	**87.9**
• Important social, occupational, or recreational activities are given up or reduced because of substance use	**90.5**	**85.5**	**87.9**
• The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance use	**69.8**	**59.4**	**64.4**
Meet DSM Criteria for Substance Dependence	**98.4**	**92.8**	**95.5**

ASAM Placement Criteria for Intensive Inpatient Treatment

- **95% of the "Becca" youth admitted to residential treatment met ASAM criteria for placement in residential treatment. To meet criteria for such placement, youth need to meet criteria for substance dependence and meet criteria for two out of the six ASAM dimensions. Nearly two-thirds of the youth met criteria for all six dimensions.**

Table 9 presents ASAM criteria for treatment placement. To meet ASAM criteria for placement in residential treatment (Level III, medically monitored intensive inpatient treatment), youth need to meet criteria for substance dependence and meet criteria for two of the six ASAM dimensions. All but six of the youth met ASAM criteria for residential placement. These six youth that did not meet ASAM criteria were the same youth that did not meet DSM-IV criteria for substance dependence.

Nearly all the youth met the criteria for emotional/behavioral conditions, treatment acceptance/resistance, relapse, and recovery environment criteria. A somewhat smaller but still

substantial percentage (over 75%) met withdrawal or biomedical criteria. There were no differences by gender in the proportion meeting ASAM criteria.

Table 9: Percent "Becca" Youth Meeting ASAM Placement Criteria for Intensive Inpatient Treatment, by Gender

ADMISSION CRITERIA (Based on American Society of Addiction Medicine (ASAM) Criteria)	Male Percent (n=63)	Female Percent (n=69)	Full Sample Percent (n=132)
WITHDRAWAL			
Risk of withdrawal is present, but manageable in current treatment setting	**74.6**	**78.3**	**76.5**
BIOMEDICAL CONDITIONS/COMPLICATIONS			
Continued alcohol/drug use places the patient in imminent danger of serious damage to biomedical health or concomitant biomedical conditions	17.5	13.0	15.2
Biomedical complications of addiction require medical monitoring, but not acute medical care	60.3	65.2	62.9
Meets at least one biomedical condition	**77.8**	**75.4**	**76.5**
EMOTIONAL/BEHAVIORAL CONDITIONS			
Current inability to maintain behavioral stability for more than a 48 hour period	88.9	84.1	86.4
Mild to moderate risk of behaviors endangering self or others	19.0	33.3	26.5
Presence of a psychiatric diagnosis requiring management concurrent with the treatment of addiction	54.0	43.5	48.5
Behaviors sufficiently chronic and/or disruptive so as to require separation from the current environment	74.6	72.5	73.5
Meets at least one emotional criteria	**98.2**	**94.2**	**96.2**
TREATMENT ACCEPTANCE/RESISTANCE			
The patient is having difficulty acknowledging his/her alcohol and/or drug problems and is not able to follow through with treatment in a less intense environment.	**95.2**	**91.2**	**92.4**
RELAPSE POTENTIAL			
The patient is experiencing an intensification of addiction symptomatology	92.1	79.7	85.6
The patient recognizes that alcohol and/or other drug use is excessive and has attempted to reduce or control it, but has been unable to do so as long as alcohol and/or drugs are present in the environment	49.2	52.2	50.8
If abstinent, the patient is experiencing an acute crisis and appears to be in imminent danger of using alcohol or drug	1.6	0	.8
The patient is unable to remain alcohol and drug free long enough to benefit from treatment in a less intensive level of care.	96.8	85.5	90.9
Meet at least one relapse condition	**98.4**	**92.8**	**95.5**

Table 9 (Cont.)

ADMISSION CRITERIA (Based on American Society of Addiction Medicine (ASAM) Criteria)	Male Percent (n=63)	Female Percent (n=69)	Full Sample Percent (n=132)
RECOVERY ENVIRONMENT			
The patient's current environment is not conducive to successful treatment at less intensive levels of care	93.7	82.6	87.9
The parent or legal guardians are unable to provide consistency or participation necessary to support less intensive levels of care	65.1	65.2	65.2
Logistic impediments preclude participation in less intensive levels of care	3.2	4.3	3.8
There is danger of physical, sexual, and/or severe emotional attack or victimization in the patient's current environment which will make recovery unlikely without removing the individual from this environment	4.8	17.4	11.4
Meets at least one recovery environment criteria	**98.4**	**92.8**	**95.5**

Tables 10 and 11 present the DSM-IV criteria and ASAM placement criteria, respectively, by type of admission. All of the ITA and truant youth met the DSM-IV and ASAM criteria, as did all but 4 of the ARY youth and all but 2 of the CHINS admissions. All of the ITA and truant youth also showed evidence of physiological dependence.

Table 10: Percent "Becca" Youth Meeting DSM-IV Criteria for Substance Dependence, by Admission Type

DIAGNOSIS: DSM-IV Substance Dependence criteria (Must meet three or more of the seven major criteria categories).	**ARY (n=91)**	**CHINS (n=26)**	**ITA (n=10)**	**Truancy (n=4)**
• Meet Tolerance criteria for dependence (must meet one of the following criteria)	**84.6**	**88.5**	**100**	**100**
Need for markedly increased amount of substance to achieve intoxication or desired effect	70.3	88.5	90.0	100
Markedly diminished effect with continued use of the same amount of the substance	18.7	11.5	10.0	0
• Meet Withdrawal criteria for dependence (must meet one of the following criteria)	**72.5**	**84.6**	**100**	**100**
Characteristic withdrawal syndrome for the substance	71.4	84.6	90.0	100
Same substance is taken to relieve or avoid withdrawal symptoms	5.5	7.7	20.0	0
• The substance is often taken in larger amounts or over a longer period than was intended	**82.4**	**88.5**	**100**	**75.0**
• There is a persistent desire or unsuccessful efforts to cut down or control substance use	**56.0**	**34.6**	**70.0**	**25.0**
• A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects	**87.9**	**84.6**	**100**	**75.0**
• Important social, occupational, or recreational activities are given up or reduced because of substance use	**87.9**	**88.5**	**90.0**	**100**
• The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance use	**62.6**	**73.1**	**80.0**	**25.0**
Meet DSM Criteria for Substance Dependence	**95.6**	**92.3**	**100**	**100**

Table 11: Percent "Becca" Youth Meeting ASAM Placement Criteria for Intensive Inpatient Treatment, by Admission Type

ADMISSION CRITERIA (Based on American Society of Addictive Medicine (ASAM) Criteria)	ARY (n=91)	CHINS (n=26)	ITA (n=10)	Truancy (n=4)
WITHDRAWAL				
Risk of withdrawal is present, but manageable in current treatment setting	**70.3**	**88.5**	**100**	**75.0**
BIOMEDICAL CONDITIONS/COMPLICATIONS				
Continued alcohol/drug use places the patient in imminent danger of serious damage to biomedical health or concomitant biomedical conditions	11.0	15.4	40.0	50.0
Biomedical complications of addiction require medical monitoring, but not acute medical care	62.6	69.2	60.0	25.0
Meets at least one biomedical condition	**72.5**	**80.8**	**100**	**75.0**
EMOTIONAL/BEHAVIORAL CONDITIONS				
Current inability to maintain behavioral stability for more than a 48 hour period	83.5	88.5	100	100
Mild to moderate risk of behaviors endangering self or others	25.3	26.9	50.0	0
Presence of a psychiatric diagnosis requiring management concurrent with the treatment of addiction	41.8	73.1	60.0	0
Behaviors sufficiently chronic and/or disruptive so as to require separation from the current environment	73.6	69.2	70.0	100
Meets at least one emotional criteria	**96.7**	**92.3**	**100**	**100**
TREATMENT ACCEPTANCE/RESISTANCE				
The patient is having difficulty acknowledging his/her alcohol and/or drug problems and is not able to follow through with treatment in a less intense environment.	**92.2**	**92.3**	**100**	**100**
RELAPSE POTENTIAL				
The patient is experiencing an intensification of addiction symptomatology	84.6	84.6	100	75
The patient recognizes that alcohol and/or other drug use is excessive and has attempted to reduce or control it, but has been unable to do so as long as alcohol and/or drugs are present in the environment	52.7	46.2	60.0	25.0
If abstinent, the patient is experiencing an acute crisis and appears to be in imminent danger of using alcohol or drug	1.1	0	0	0
The patient is unable to remain alcohol and drug free long enough to benefit from treatment in a less intensive level of care.	89.0	92.3	100	100
Meet at least one relapse condition	**95.6**	**92.3**	**100**	**100**

Table 11 (Cont.)

ADMISSION CRITERIA (Based on American Society of Addictive Medicine (ASAM) Criteria)	ARY (n=91)	CHINS (n=26)	ITA (n=10)	Truancy (n=4)
RECOVERY ENVIRONMENT				
The patient's current environment is not conducive to successful treatment at less intensive levels of care	86.8	84.6	100	100
The parent or legal guardians are unable to provide consistency or participation necessary to support less intensive levels of care	62.6	69.2	90.0	50.0
Logistic impediments preclude participation in less intensive levels of care	4.4	3.8	0	0
There is danger of physical, sexual, and/or severe emotional attack or victimization in the patient's current environment which will make recovery unlikely without removing the individual from this environment.	9.9	19.2	10.0	0
Meets at least one recovery environment criteria	**95.6**	**92.3**	**100**	**100**

III. CHARACTERISTICS OF TREATMENT EPISODES

Funding Source

- **79% of "Becca" youth admitted to chemical dependency residential treatment received some public funding for their treatment.**
- **All of the ITA admissions and about 90% of the CHINS admissions were publicly funded. In contrast, 3 out of the 4 youth admitted with a truancy petition were funded through private sources.**

As shown in Table 12, over two-thirds of "Becca" youth admissions were funded entirely with public funds, and 10% were funded through a combination of public and private sources. The proportions of public to private funding did not vary by gender.

Table 12: Treatment Funding Source by Gender

TREATMENT ADMISSION	Male	Female	Overall
Funding Source	% n=63	% n=69	% n=132
Private	19.0 (12)	23.2 (16)	21.2 (28)
DASA	25.4 (16)	39.1 (27)	32.6 (43)
DASA/Title XIX	47.6 (30)	26.1 (18)	36.4 (48)
DASA & Insurance/Private	7.9 (5)	11.6 (8)	9.8 (13)

Table 13: Treatment Funding Source by Type of Admission

	ARY	CHINS	ITA	Truant
FUNDING SOURCE	% n=91	% n=26	% n=10	% n=4
Private	23.1 (21)	11.5 (3)	0	75.0 (3)
DASA	30.8 (28)	53.8 (14)	0	25.0 (1)
DASA/Title XIX	34.1 (31)	30.8 (8)	90.0 (9)	0
DASA & Insurance/Private	12.1 (11)	3.8 (1)	10.0 (1)	0

Prior Treatment History

- **Over 60% of "Becca" youth received prior chemical dependency treatment. A larger proportion of males (43%) than females (26%) had previously received residential treatment.**
- **63% of the "Becca" youth had received some form of prior mental health treatment, with about 20% having received in-patient treatment and 38% having received family counseling.**

Table 14: Prior Chemical Dependency (CD) and Mental Health Treatment, by Gender

PRIOR TREATMENT	Male	Female	Overall
Prior CD Treatment History	% n=63	% n=69	% n=132
Prior Residential Treatment*	42.9 (27)	26.1 (18)	34.1 (45)* *(p<.05)*
Prior Outpatient Treatment	55.6 (35)	43.5 (30)	49.2 (65)
Any Prior CD Treatment	**68.3 (43)**	**53.6 (37)**	**60.6 (80)**
Prior Mental Health Treatment	% n=63	% n=69	% n=132
Prior Residential Treatment	27.0 (17)	13.0 (9)	19.7 (26)
Prior Outpatient Treatment	41.3 (26)	36.2 (25)	38.6 (51)
Family Counseling	39.7 (25)	36.2 (25)	37.9 (50)
Any Mental Health Treatment	**63.5 (40)**	**62.3 (43)**	**62.9 (83)**

The majority of the "Becca" youth admitted to residential chemical dependency treatment had received some form of prior chemical dependency treatment. Over half had received outpatient treatment and a third had received inpatient services. However, this was the first admission to residential treatment for a larger proportion of females than for males. About 43% of the males, compared to 26 % of the females had a prior residential treatment admission ($p<.05$). Most youth had also received some form of prior mental health services. About 20% had received inpatient treatment, and close to 40% had received prior outpatient mental health services. Only 19% of the youth had not received any previous chemical dependency or mental health treatment, and 40% had received both types of services (not shown). Thus, most "Becca" youth already had some history of involvement with the social service system prior to their admission to residential treatment.

- **The proportion receiving prior chemical dependency treatment did not vary by type of admission, but a larger percentage of ITA and CHINS youth received prior mental health services than ARY youth.**

Table 15: Prior Chemical Dependency (CD) and Mental Health (MH) Treatment, by Type of Admission

PRIOR TREATMENT	ARY	CHINS	ITA	Truant	
Prior CD Treatment History	% n=91	% n=26	% n=10	% n=4	
Prior Residential Treatment	29.7 (27)	42.3 (11)	70.0 (7)	0	
Prior Outpatient Treatment	49.5 (45)	46.2 (12)	70.0 (7)	25.0 (1)	
Any Prior CD Treatment	**62.6 (57)**	**57.7 (15)**	**70.0 (7)**	**25.0 (1)**	
Prior MH Treatment	% n=91	% n=26	% n=10	% n=4	
Prior Residential Treatment*	11.0 (10)	42.3 (11)	50.0 (5)	0	*(p<.01)
Prior Outpatient Treatment*	25.3 (23)	73.1 (19)	60.0 (6)	50.0 (2)	*(p<.01)
Family Counseling*	39.6 (36)	23.1 (6)	70.0 (7)	25.0 (1)	* (p<.05)
Any Mental Health Treatment	**54.9 (50)**	**84.6 (22)**	**80.0 (8)**	**50.0 (2)**	*(p<.05)

Only 30% of the ARY youth, compared to 40% of CHINS and 70% of ITA youth, had prior residential treatment. Given the small numbers for each type of admission, this difference was not significant. However, CHINS and ITA youth were more likely to have had prior mental health services than ARY youth ($p<.05$).

Type of Discharge from Treatment

- **Over half (51%) of the youth completed treatment. There were no significant differences in rates of treatment completion by gender.**
- **Among youth who did not complete treatment, type of treatment discharge differed by gender**
  - **56% of males who did not complete treatment, compared to 19% of the females, were discharged from treatment due to rule violations including repeated noncompliance, violence, or property destruction.**
  - **Over 40% of females who did not complete treatment, compared to 19% of males, ran from treatment.**

Table 16: Type of Treatment Discharge by Gender

TREATMENT ADMISSION DISCHARGE TYPE AND REASON	Male % n=63	Female % n=69	Overall % n=132
Completed Treatment	**46.0 (29)**	**55.1 (38)**	**50.8 (67)**
Withdrew WITH Staff Advice	**1.6 (1)**	**7.2 (5)**	**4.5 (6)**
• *Repeated Noncompliance*	*1.6 (1)*	*1.4 (1)*	*1.5 (2)*
• *Dx: Abuse Not Dependence*	*0 0*	*4.3 (3)*	*2.3 (3)*
• *Other*	*0 0*	*1.4 (1)*	*0.8 (1)*
Withdrew AGAINST Staff Advice	**6.3 (4)**	**7.2 (5)**	**6.8 (9)**
Ran/No Contact	**6.3 (4)**	**18.8 (12)**	**12.1 (16)**
• *Ran And Returned Multiple Times*	*1.6 (1)*	*2.9 (0)*	*0.8 (1)*
• *Ran, Refused Offer to Return*	*3.2 (2)*	*7.2 (5)*	*5.3 (7)*
• *Ran, No Contact*	*1.6 (1)*	*8.7 (7)*	*6.1 (8)*
Rule Violation	**28.6 (18)**	**7.2 (5)**	**17.4 (23) (p<.01)**
• *Ran and Returned Multiple Times*	*4.8 (3)*	*0 0*	*2.3 (3)*
• *Repeated Noncompliance*	*15.9 (10)*	*4.3 (3)*	*10.6 (14)*
• *Physical Violence*	*6.3 (4)*	*1.4 (1)*	*2.3 (3)*
• *Property Destruction*	*1.6 (1)*	*1.4 (1)*	*1.5 (2)*
Incarcerated	**3.2 (2)**	**0 0**	**1.5 (2)**
• *Physical Violence*	*1.6 (1)*	*0 (0)*	*0.8 (1)*
• *Property Destruction*	*1.6 (1)*	*0 (0)*	*0.85 (1)*
Transfer to CD Agency	**1.6 (1)**	**1.4 (1)**	**1.5 (2)**
• *Ran and Returned Multiple Times*	*0 (0)*	*1.4 (1)*	*0.8 (1)*
• *Repeated Noncompliance*	*1.6 (1)*	*0 0*	*0.8 (1)*
Transfer to MH Agency	**6.3 (4)**	**4.3 (3)**	**5.3 (7)**

Table 16 presents the type of discharge as reported by the agency, and a more detailed description of the reasons for the discharge (presented in italics) that was obtained by the medical

necessity reviewer through chart review and staff interviews. It should be noted that some of the reasons are found under multiple discharge types. For example, youth who ran multiple times may have been transferred to another facility, discharged for rule violation, or discharged as ran from treatment/no contact. Also, although the discharge type for most youth whose discharge reason was repeated non-compliance, physical violence, or property destruction was designated as rule violation, there were a few youth who were discharged for these reasons whose discharge type was leaving with staff advice or as being incarcerated. When comparisons are made by gender or type of admission for the discharge types running from treatment and rule violation, youth who fit these categories based on the reasons for discharge are included in the comparisons.

Over half of the "Becca" youth completed treatment. Treatment completion is defined as having completed all program tasks as outlined in the individualized treatment plan of the residential program and is not based on the number of days in the treatment program. Among those who did not complete treatment, the type and reasons for discharge varied by gender.

Among those who did not complete treatment, males were more likely than females to be discharged for rule violations defined as repeated noncompliance, physical violence, or property destruction. Fifty-six percent (19/34) of the males who did not complete treatment were discharged due to violating rules, compared to 19% (6/31) of the females *($p<.01$)*. Two of these males were incarcerated, one for violence and one for property destruction. An additional three males were discharged for rule violations stemming from repeating running from treatment.

Females were more likely than males to run from treatment. Over 40% of the females who did not complete treatment (13/31) ran from treatment, compared to 21% (7/34) of the males *($p<.07$)*. Three males ran multiple times and were discharged as a rule violation, whereas only one female ran and returned multiple times and this female was eventually transferred to another facility. Most of the females who ran from treatment either refused offers to return or had no further contact with the agency.

All of the youth (7%) who were discharged against staff advice were removed from treatment by their parents. Five of the seven females who were discharged with staff advice were diagnosed with a substance abuse disorder and not substance dependence and thus were determined to not require residential treatment. About five percent (7) of the youth were transferred to a mental health facility.

- **About half of the ARY and ITA youth completed treatment, compared to only about 25% of the CHINS and Truant youth.**

Table 17: Type of Treatment Discharge by Type of Admission

DISCHARGE TYPE AND REASON	ARY n=91	CHINS n=26	ITA n=10	Truant n=4
Completed Treatment*	**58.2 (53)**	**26.9 (7)**	**50.0 (5)**	**25.0 (1)**
Withdrew WITH Staff advice	**4.4 (4)**	**7.7 (2)**	**0 (0)**	**0 (0)**
• Repeated Noncompliance	*1.1 (1)*	*3.8 (1)*	*20.0 (2)*	*0 (0)*
• Dx: Abuse Not Dependence	*2.2 (2)*	*3.8 (1)*	*0 (0)*	*0 (0)*
• Other	*1.1 (1)*	*0 (0)*	*0 (0)*	*0 (0)*
Withdrew AGAINST Staff Advice	**4.4 (4)**	**3.8 (1)**	**20.0 (2)**	**50.0 (2)**
Ran/No Contact	**8.8 (8)**	**23.1 (6)**	**20 (2)**	**0 (0)**
• Ran & returned multiple times	*1.1 (1)*	*0 (0)*	*0 (0)*	*0 (0)*
• Ran, refused offer to return	*2.2 (2)*	*11.5 (3)*	*20 (2)*	*0 (0)*
• Ran, no contact	*5.5 (5)*	*11.5 (3)*	*0 (0)*	*0 (0)*
Rule Violation	**14.4 (14)**	**26.9 (7)**	**10.0 (1)**	**25.0 (1)**
• Ran and Returned Multiple Times	*2.2 (2)*	*3.8 (1)*	*0 (0)*	*0 (0)*
• Repeated Non-Compliance	*9.9 (9)*	*11.5 (3)*	*10.0 (1)*	*0 (0)*
• Physical Assault	*3.3 (3)*	*7.7 (2)*	*0 (0)*	*0 (0)*
• Property Destruction	*0 (0)*	*3.8 (1)*	*0 (0)*	*25.01 (1)*
Incarcerated	**2.2 (2)**	**0 (0)**	**0 (0)**	**0 (0)**
• Physical Assault	*1.1 (1)*	*0 (0)*	*0 (0)*	*0 (0)*
• Property Destruction	*1.1 (1)*	*0 (0)*	*0 (0)*	*0 (0)*
Transfer to CD Agency	**2.2 (2)**	**0 (0)**	**0 (0)**	**0 (0)**
• Ran and Returned Multiple Times	*1.1 (1)*	*0 (0)*	*0 (0)*	*0 (0)*
• Repeated Non-Compliance	*1.1 (1)*	*0 (0)*	*0 (0)*	*0 (0)*
Transfer to MH Agency	**4.4 (4)**	**11.5 (3)**	**0 (0)**	*0 (0)*

** The proportion of ARY and ITA youth (combined) who completed was significantly different from CHINS youth ($p<.01$).*

CHINS admissions were less likely to complete treatment than ARY and ITA youth ($p<.01$). CHINS youth were also somewhat more likely to run from treatment than other youth. Twenty-seven percent of CHINS youth (7/26) compared to 12% of other youth (13/106) ran from treatment ($p<.07$). ARY youth typically entered treatment with more parental involvement than CHINS youth. To successfully obtain an ARY petition requires time and effort of parents. Youth with a CHINS petition, on the other hand, often did not have parental involvement and in

fact were in need of an out of home placement. Another difference is that both ARY and ITA youth entered treatment under authority of the court whereas CHINS youth did not. Having the threat of contempt of court over their heads if they leave treatment on their own may have some effect on keeping youth in treatment. The findings that CHINS youth are less likely to complete treatment, and more likely to run from treatment than other youth, is worthy of further investigation.

Treatment Episode Characteristics by Level of Treatment

There are two levels of residential treatment for adolescents in Washington state: Level I, Youth *Basic* Residential Treatment and Level II, Youth *Intensive* Residential Treatment. Level II treatment serves youth who have symptoms of mental health diagnosis requiring concurrent management with addiction treatment, have extreme family dysfunction, have experienced trauma, present a major risk of danger to him/herself or others, or are at high risk to not complete treatment. The length of treatment is determined by the clinical staff based on the treatment plan for each youth. Typical length of stay for Level I programs is between 21 and 28 days, and for Level II programs, between 45-to 60 days. Note that Level I and Level II residential treatment designations are distinct from the ASAM levels of treatment designations discussed earlier.

- **Overall, 70% of the "Becca" youth were admitted to Level II programs.**
- **Youth in Level I programs were more likely to complete treatment than youth in Level II programs. 76% of "Becca" youth in Level I programs completed treatment compared to 37% of "Becca" youth in Level II programs.**
- **All of the youth who "ran" from treatment were in Level II programs.**

Table 18: Characteristics of Treatment Episode by Treatment Level and Gender

	LEVEL I		LEVEL II	
Gender	**%**	**n=42**	**%**	**n=90**
Male	27.0	(17)	73.0	(46)
Female	36.2	(25)	68.8	(44)
Admission Type	**%**	**n=42**	**%**	**n=90**
ARY	73.8	(31)	66.7	(60)
CHINS	14.3	(6)	22.2	(20)
ITA	2.11	(1)	10.8	(9)
Truant	7.1	(3)	1.1	(1)
Parent	2.4	(1)	0.0	(0)
DISCHARGE TYPE	**%**	**n=42**	**%**	**n=90**
Completed Treatment	78.6	(33)	37.8	(34)
Withdrew WITH Staff Advice	4.8	(2)	4.4	(4)
Withdrew AGAINST Staff Advice	7.1	(3)	6.7	(6)
Ran/No Contact	0.0	(0)	17.8	(16)
Rule Violation	7.1	(3)	22.2	(20)
Incarcerated	0.0	(0)	2.2	(2)
Transferred	2.4	(1)	8.9	(8)

As would be expected for runaway or at-risk youth, the majority of "Becca" youth admitted to residential treatment were admitted to Level II programs (Table 18). Nearly three-quarters of the males and two-thirds of the females were admitted to Level II programs. These proportions by gender were not significantly different. All but one of the ten ITA youth were admitted to Level

II programs. Three of the four youth considered "Becca" youth because of truancy petitions were admitted to Level I programs.

Treatment completion rates for Level I programs were nearly twice that of Level II programs. Nearly 80% of youth in Level I programs completed treatment compared to nearly 40% for Level II programs ($p<.001$). All of the youth who ran from treatment, and 87% of those discharged due to rule violations (20/23) were youth in Level II program. However, it is important to reiterate that youth who are thought to be at a greater risk of leaving treatment prematurely, or who have more serious complications, are more likely to be placed in Level II programs. Nevertheless, it appears that there is a substantial proportion of youth for whom Level II programs are not able to successfully retain in treatment. From Table 20, which presents information on treatment episodes by treatment agency, it appears that there are two Level II treatment agencies with substantially lower treatment completion rates, and high rates of discharge due to rule violation, which lowers the overall treatment completion rate for the Level II programs. More information is needed to more fully understand the context and reasons for the low rate of treatment completion. There is a need for further investigation into whether there are steps the programs can take to be better able to retain this subgroup of youth in treatment who are prone to running or serious problem behavior, or, if other treatment alternative may need to be developed.

- **On average, males were in Level II treatment longer than were females. Among youth who completed Level II treatment, males were in treatment an average of 43 days, whereas females were in treatment and average of 30 days.**

Table 19: Length of Treatment by Treatment Level and Gender

	Level I			Level II		
	Male	**Female**	**Total Level I**	**Male**	**Female**	**Total Level II**
Days in Treatment	**n=17**	**n=25**	**n=42**	**n=46**	**n=44**	**n=90**
Avg. Number Days*	27.8	28.2	28.0	29.7	21.4	25.7 (p<.05)
Median Number Days	28.0	28.0	28.0	27.5	18.5	20.0
Range	1-42	1-58	1-58	0-64	1-79	0-79
Days in Treatment for Tx Completers	**n=13**	**n=20**	**n=33**	**n=16**	**n=18**	**n=34**
Avg. Number Days	32.1	32.3	32.2	42.7	29.7	35.8 (p<.06)
Median Number Days	34.0	28.0	28.0	51.5	24.5	29.0
Range	13-42	28-58	13-58	13-64	5-79	5-79
Days in Treatment for Non Tx Completers	**n=4**	**n=5**	**n=9**	**n=30**	**n=26**	**n=56**
Avg. Number Days	13.8	11.6	12.6	22.8	15.7	19.5
Median Number days	8.0	13.0	11.0	17.5	10.0	14.0
Range	1-38	1-18	1-38	0-61	0-64	0-64

Table 19 also presents information on the length of time in treatment by treatment level and gender. There is no set length of treatment for Level I or Level II programs. Rather, as was noted earlier, an individual treatment plan is developed for each youth and the length of treatment is based on the requirements of this plan. However, it is expected that on average Level II treatment programs are longer than Level I programs. No differences in length of treatment were found between "Becca" youth in Level I and Level II programs. One possible explanation of the similar amount of treatment for youth in Level I and Level II programs is that youth in Level II programs are more likely to leave treatment before completion. However,

when we compared the average length of time in treatment among those who completed treatment, the average length of time was not different suggesting this is not a very plausible explanation. However, there were differences in length of treatment by gender for youth in Level II programs. Further, this gender difference was only among youth who completed treatment in Level II programs.

Among males who completed treatment, those in Level II programs did receive more treatment days than males in Level I programs (mean = 43 vs. 32 days, $p<.05$). Among females who completed treatment, those in Level II programs actually were in treatment fewer days on average than females completing treatment in Level I programs (mean = 30 vs. 32 days), although this difference was not statistically significant. More striking, among youth who completed Level II treatment, females received fewer treatment days compared to males. This difference was significant at a trend level ($p<.06$). The difference in amount of treatment for females in Level II females may in fact more of an agency effect than a gender difference per se. Half of the females in Level II programs were at one agency and this agency has an shorter average length of treatment compared to all other agencies (See Table 22). Although it may be that the shorter treatment duration is consistent with the most appropriate treatment plan for the individuals, it warrants further examination.

Table 20: Characteristics of Treatment Episode by Agency

	LEVEL I		LEVEL II				
	Agency I-A	Agency I-B	Agency II-A	Agency II-B	Agency II-C	Agency II-D	Agency II-E
Gender	% n=12	% n=30	% n=11	% n=16	% n=19	% n=39	% n=5
Male	58.3 (7)	33.3 (10)	27.3 (3)	56.3 (9)	100 (19)	35.9 (14)	20.0 (1)
Female	41.7 (5)	66.7 (20)	72.7 (8)	43.8 (7)	0 (0)	64.1 (25)	80.0 (4)
Admission Type	% n=12	% n=30	% n=11	% n=16	% n=19	% n=39	% n=5
ARY	58.3 (7)	80.0 (24)	81.8 (9)	56.3 (9)	36.8 (7)	84.6 (33)	40.0 (2)
CHINS	25.0 (3)	10.0 (3)	9.1 (1)	43.8 (7)	21.1 (4)	12.8 (5)	60.0 (3)
ITA	8.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	42.1 (8)	2.6 (1)	0.0 (0)
Truant	0.0 (0)	10.0 (3)	9.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
Parent Admission	8.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (.0)
Avg. Days in Treatment ("Becca" admission)	n=12	n=30	n=11	n=16	n=19	n=39	n=5
Avg. number days	*41.1*	*22.8*	*41.3*	*24.2*	*37.2*	*16.1*	*27.0*
Median number days (Range)	*39.0 (34-58)*	*28.0 (1-35)*	*38.0 (4-79)*	*18.5 (1-60)*	*46.0 0-64*	*15.0 (1-35)*	*28.0 (11-48)*
DISCHARGE TYPE	% n=12	% n=30	% n=11	% n=16	% n=19	% n=39	% n=5
Completed Treatment	91.7 (11)	73.3 (22)	27.3 (3)	6.3 (1)	42.1 (8)	48.7 (19)	60.0 (3)
Withdrew WITH Staff Advice	0.0 (0)	6.7 (2)	0.0 (0)	6.3 (1)	0.0 (0)	7.7 (3)	0.0 (0)
Withdrew AGAINST Staff Advice	0.0 (0)	10.0 (3)	9.1 (1)	6.3 (1)	15.8 (3)	2.6 (1)	0.0 (0)
Ran/No Contact	0.0 (0)	0.0 (0)	18.2 (2)	18.8 (3)	15.8 (3)	17.9 (7)	20.0 (1)
Rule Violation	0.0 (0)	10.0 (3)	36.4 (4)	50.0 (8)	15.8 (3)	12.8 (5)	0.0 (0)
Incarcerated	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	5.1 (2)	0.0 (0)
Transferred	8.3 (1)	0.0 (0)	9.1 (1)	12.5 (2)	10.5 (2)	5.1 (2)	20.0 (1)

CONCLUSION

- **The medical necessity review of the youth admitted to residential treatment under the auspices of the "Becca" Bill found that residential chemical dependency treatment was appropriate for over 95% of the youth.**

All but six (4.5%) of the 132 "Becca" youth admitted to residential treatment between August, 1995 and December, 1996 met DSM-IV criteria for substance dependence and ASAM criteria for intensive inpatient treatment. In fact, the majority of youth far exceeded minimum criteria for substance dependence--indicating the youth exhibited clinically significant levels of impairment. The profiles of the substance dependence criteria showed a high proportion of youth who are not able to control their drug use, who are devoting a great deal of time to drug use or recovery from its use, and who are giving up important activities because of the use of alcohol or other drugs. About 88 percent of the youth presented evidence of physical dependence as manifested by either withdrawal symptoms, development of tolerance, or both. It is also worthy of note that nearly all of the very high risk run-away youth signed into treatment on a voluntary basis.

All but six of the youth met ASAM criteria for residential treatment, and nearly two-thirds of "Becca" youth met criteria for all six of the ASAM dimensions. The ASAM criteria portray youth with severe levels of behavioral instability and escalating drug use who are living in an environment that is not conducive to successful treatment at less intensive levels of care. In fact, about two-thirds of the youth had parents or legal guardians who were unable to provide the support necessary for less intensive levels of care. This is consistent with the finding that over 70% of the youth were reported to have parents with a history of substance abuse, although this figure includes parents and step-parents who may or may not still be involved in the youths' lives. The high proportion of parental drug abuse and youth coming from environments not conducive to the youth's recovery raises questions about the efficacy of the "Becca" Bill with its sole focus on compelling youth to obtain treatment services. Measures may be needed which address the larger family issues.

The evaluation suggests at least three areas for further study.

- **Gender differences in patterns of drug use and length of treatment**

A higher proportion of females than males claim their drug of choice is a substance other than marijuana. Females were also more likely to run from treatment than males and receive fewer treatment days than males in Level II treatment programs. Males were more likely than females to be discharged due to rule violations. These findings suggest that gender differences exist regarding substance use patterns and treatment. Additional research is needed to examine possible gender differences in more detail and the extent to which these differences have an impact on treatment effectiveness and retention.

- **Geographic gap in residential treatment admissions for "Becca" youth.**

This report conducted very limited analysis of where "Becca" youth were from, and investigated only the first year and a half of the bill's implementation. However, it was quite striking that no "Becca" youth were admitted to residential treatment from the eastern central part of the state. Does this lack of admission reflect a lesser need for youth accessing treatment via the "Becca" bill's provisions, lack of information or implementation of the Bill's provisions, or does it reflect some other factor?

- **Investigation of treatment completion rates and ways to increase treatment retention for youth.**

Overall, half of the youth completed treatment. The treatment completion rates differed substantially between youth in Level I and Level II programs. The overall treatment completion rates for Level I programs was nearly twice that of Level II programs. Given that the most difficult and troubled youth, and youth with the greatest risk for leaving treatment prematurely, are placed in Level II programs, it is not surprising that the treatment completion rates are lower for these programs. However, the majority of youth do not complete treatment in Level II programs. Many of these youth either ran from treatment or were discharged for out-of-control or violent behavior--the very behaviors that may have spurred the petition or involuntary treatment procedures in the first place. This suggest that some changes are needed to be able to increase treatment retention without risking the safety or impinging on the treatment experience of other youth. There is also a need to look at broader treatment needs of these youth beyond chemical dependency. DASA funds primary chemical dependency treatment but many of these youth have multiple needs that cut across different systems including mental health and DCFS.

It should be noted that although this sample comprised only "Becca" youth, "Becca" youth may not be all that different from other youth in residential treatment. A recently conducted study of treatment outcomes that compares a sample of "Becca" youth to "non-Becca" youth in residential treatment found similar rates of problem behavior prior to treatment, as well as similar rates of treatment completion (Peterson et al., 1997).

It is beyond the scope of this study to propose specific recommendations about increasing treatment retention. The findings do, however, suggest that further investigation is warranted. Types of information that would be helpful include information on reasons youth run from treatment or are discharged early, agencies' policies regarding rule violations and how they are handled, level of staff training in dealing with noncompliant and violent youth, and staff training and procedures in working with youth at risk for running from treatment. Although additional secure treatment facilities is one option, it is an expensive option and one which may be appropriate or necessary for relatively few youth. Other options that could be explored include allocating additional resources to reduce the staff to client ratio and enable more individualized treatment, or the provision of specialized staff training.

At-risk youth are entering chemical dependency treatment through the provisions of the "Becca" Bill. Retention rates for the most troubled youth placed in Level II programs are low, suggesting that improving the programs will require fuller understanding of why youth run from treatment or are discharged early. Programs can then be modified to address these issues specific to substance dependent youth and help retain youth in treatment through to successful completion.

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